

A2 34. (Amended) Isolated nucleic acid encoding Apo-3 polypeptide comprising amino acid residues 1 to 417, 25 to 417, 25 to 198, or 338 to 417 of SEQ ID NO:6, or a biologically active variant thereof.

35. (As filed) The nucleic acid of claim 34 wherein said nucleic acid encodes native sequence Apo-3 comprising amino acid residues 1 to 417 of SEQ ID NO:6.

36. (As filed) A vector comprising the nucleic acid of claim 34.

37. (As filed) The vector of claim 36 operably linked to control sequences recognized by a host cell transformed with the vector.

38. (As filed) A host cell comprising the vector of claim 36.

39. (As filed) A process of using a nucleic acid molecule encoding Apo-3 to effect production of Apo-3 comprising culturing the host cell of claim 38.

Please add the following claims:

---46. An isolated nucleic acid molecule comprising a polynucleotide encoding amino acids 19 to 204 of SEQ ID NO:6.

47. The isolated nucleic acid molecule of claim 46 which comprises nucleotides 146 to 700 of SEQ ID NO:9. - no support

A2 48. The isolated nucleic acid molecule of claim 46 further comprising a heterologous polynucleotide.

49. The isolated nucleic acid molecule of claim 48, wherein said heterologous polynucleotide encodes a heterologous polypeptide.

50. A vector comprising the isolated nucleic acid molecule of claim 46.

51. A host cell comprising the isolated nucleic acid molecule of claim 46 operatively associated with a heterologous regulatory sequence.

52. A method for making a vector comprising inserting an isolated nucleic acid molecule of claim 46 into a vector.

53. A method of making a host cell comprising introducing the vector of claim 50 into a host cell.

54. A host cell produced by the method of claim 53.

55. A method for producing a polypeptide encoded by said isolated nucleic acid molecule, comprising culturing the host cell of claim 51 under conditions such that said polypeptide is expressed and recovering said polypeptide.

56. A host cell comprising the isolated nucleic acid molecule of claim 46.

57. A method for producing a polypeptide encoded by said isolated nucleic acid molecule, comprising culturing the host cell of claim 56 under conditions such that said polypeptide is expressed and recovering said polypeptide.

58. An isolated nucleic acid molecule comprising a polynucleotide encoding a polypeptide having the mature amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 55820.

59. The isolated nucleic acid molecule of claim 58, wherein said polynucleotide encodes a polypeptide having the complete amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 55820.

60. The isolated nucleic acid molecule of claim 58 further comprising a heterologous polynucleotide.

61. The isolated nucleic acid molecule of claim 60, wherein said heterologous polynucleotide encodes a heterologous polypeptide.

62. A vector comprising the isolated nucleic acid molecule of claim 58.

63. A host cell comprising the isolated nucleic acid molecule of claim 58 operatively associated with a heterologous regulatory sequence.

64. A method for making a vector comprising inserting an isolated nucleic acid molecule of claim 58 into a vector.

65. A method of making a host cell comprising introducing the vector of claim 62 into a host cell.

66. A host cell produced by the method of claim 65.

67. A method for producing a polypeptide encoded by said isolated nucleic acid molecule, comprising culturing the host cell of claim 63 under conditions such that said polypeptide is expressed and recovering said polypeptide.

68. A host cell comprising the isolated nucleic acid molecule of claim 58.

69. A method for producing a polypeptide encoded by said isolated nucleic acid molecule, comprising culturing the host cell of claim 66 under conditions such that said polypeptide is expressed and recovering said polypeptide.

70. An isolated nucleic acid molecule encoding a polypeptide comprising at least 30 contiguous amino acids of a polypeptide having the amino acid sequence from 339 to 409 in SEQ ID NO:6, or a nucleic acid molecule having a nucleotide sequence complementary thereto.

71. The isolated nucleic acid molecule of claim 70 wherein said polypeptide comprises at least 50 contiguous amino acids of a polypeptide having the amino acid sequence from 339 to 409 in SEQ ID NO:6.

72. The isolated nucleic acid molecule of claim 70 comprising a polynucleotide encoding amino acids 339 to 409 of SEQ ID NO:6.

73. The isolated nucleic acid molecule of claim 70 further comprising a heterologous polynucleotide.

74. The isolated nucleic acid molecule of claim 73, wherein said heterologous polynucleotide encodes a heterologous polypeptide.

75. A vector comprising the isolated nucleic acid molecule of claim 70.

76. A host cell comprising the isolated nucleic acid molecule of claim 70 operatively associated with a heterologous regulatory sequence.

77. A method for making a vector comprising inserting an isolated nucleic acid molecule of claim 70 into a vector.

78. A method of making a host cell comprising introducing the vector of claim 75 into a host cell.

79. A host cell produced by the method of claim 78.

80. The host cell of claim 76 wherein said isolated nucleic acid molecule encodes a polypeptide comprising at least 30 contiguous amino acids from residues 339 to 409 in SEQ ID NO:6.

81. A method for producing a polypeptide comprising culturing the host cell of claim 80 under conditions such that the polypeptide encoded by said nucleic acid molecule is expressed and recovering said encoded polypeptide.

82. A host cell comprising the isolated nucleic acid molecule of claim 70.

83. The host cell of claim 82, wherein said isolated nucleic acid molecule encodes a polypeptide comprising at least 30 contiguous amino acids from residues 339 to 409 in SEQ ID NO:6.

84. A method for producing a polypeptide comprising culturing the host cell of claim 82 under conditions such that the polypeptide encoded by said nucleic acid molecule is expressed and recovering said encoded polypeptide.

85. Isolated nucleic acid encoding an Apo-3 polypeptide, wherein said Apo-3 polypeptide has about 80% identity to the sequence of amino acid residues 1 to 417 of SEQ ID NO:6 and said Apo-3 polypeptide inhibits or stimulates apoptosis or NF-KB in at least one type of mammalian cell.

86. The nucleic acid of claim 85, wherein said encoded Apo-3 polypeptide has about 90% identity to the sequence of amino acid residues 1 to 417 of SEQ ID NO:6.

87. The nucleic acid of claim 86, wherein said encoded Apo-3 polypeptide has about 95% identity to the sequence of amino acid residues 1 to 417 of SEQ ID NO:6.

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88. A vector comprising the nucleic acid of claim 85. ✓

89. A host cell comprising the vector of claim 88. ✓

90. A process of using a nucleic acid molecule encoding Apo-3 to effect production of Apo-3 comprising culturing the host cell of claim 89. ✓

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91. Isolated nucleic acid encoding an Apo-3 polypeptide, wherein said Apo-3 polypeptide (a) is a fragment of the sequence of amino acid residues 1 to 417 of SEQ ID NO:6, (b) lacks a transmembrane domain and/or cytoplasmic domain of native sequence human Apo-3 polypeptide, and (c) inhibits or stimulates apoptosis or NF-KB in at least one type of mammalian cell.

92. A vector comprising the nucleic acid of claim 91. ✓

93. A host cell comprising the vector of claim 92. ✓

94. A process of using a nucleic acid molecule encoding Apo-3 to effect production of Apo-3 comprising culturing the host cell of claim 93. --- ✓